

ENGINEERING-SCIENCE, INC.

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MEETING NOTES

TO: Distribution **DATE:** October 13, 1993

FROM: Philip Nixon

MEMO #: SP307:101393:01 **PROJECT #:** Solar Pond IM/IRA

ATTENDANCE: **DISTRIBUTION:**

Harlan Ainscough, CDH	Attendees
Bill Fraser, EPA	Arturo Duran, EPA
Ernie O'Toole, DOE/MMES	L. Benson
Steve Howard, DOE/SMS	A. Conklin
Andy Ledford, EG&G	P. Breen
Randy Ogg, EG&G	H. Heidkamp
Mark Austin, EG&G	K. Cutter
Steve Paris, EG&G	D. Myers
Phil Nixon, ES	S. Stenseng
Richard Henry, ES	A. Fricke
Rich Stegen, ES	B. Snyder
	T. Kuykendall
	T. Evans
	B. Cropper
	B. Wallace, EG&G (Admin. Record)
	K. Ruger, EG&G
	K. London, EG&G
	R. Wilkinson

SUBJECT: Solar Pond IM/IRA Team Meeting

1.) Distribution of Meeting Minutes

Randy Ogg and Phil Nixon distributed meeting minutes from the previous week's meeting and solicited comments from the team.

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Comments on the minutes included:

- a. Harlan Ainscough requested clarification that the resolution subcommittee be developed jointly, and that the position paper be prepared jointly with the different parties providing input on their positions.

2.) Review Comments from IM/IRA Options

Phil Nixon distributed modified handouts reflecting the comments that were received during last week's meeting. There were no comments from the team. Therefore, ES will assume that the technologies and screening strategy is appropriate and will be followed to move into a detailed analysis of alternatives.

Randy Ogg discussed the information that was received at Los Alamos with respect to alternative cover designs. Research at Los Alamos has shown that clay caps have a tendency to desiccate and fail in semi-arid environments. Dr. Tom Hakonson has performed test cap research on engineered covers that consist of backfill, pea gravel, and hearty vegetation to maximize the evapotranspiration rate. These caps have proven to be effective in that the amount of precipitation nearly equals the amount of evapotranspiration.

Randy Ogg will contact Dr. Hakonson to see if he would come to Denver to present his research results to the team.

ES will provide copies of Dr. Hakonson's papers at next week's meeting.

Randy Ogg discussed the potential benefits of soil flushing with downgradient capture of vadose zone liquids in the existing ITS system. It was discussed that this option could be favorable if the vadose zone is fairly isotropic (allows fairly uniform percolation), and the ITS system could be shown to effectively capture percolating liquids. A subsurface injection permit may be required if water/and or chemicals would be added to the flush water to enhance contaminant flushing. If a flushing system could meet the groundwater and surface water quality standards, then the system might be permitted.

Randy Ogg indicated that EG&G/DOE were considering different remedial alternatives for different ponds based on the COCs and to the extent of contamination. The group agreed that this was appropriate.

Rich Stegen posed the question concerning whether contaminated media from one pond could be removed and placed into another pond that would receive a more stringent engineered cover. Harlan Ainscough commented that movement of contaminated media or "hotspots" would enact the landfill siting requirements. He specified that the corrective action management unit (CAMU) concept had not been adopted by the CDH and is

therefore unavailable for use in getting around the Land Disposal Restriction/Placement issue.

Harlan Ainscough reiterated the CDH position that the liners are considered to be hazardous or solid waste. However, the subsurface soils and vadose zone are considered environmental media. It might be possible to leave contaminated media in-place beneath an engineered cover.

Rich Stegen is working on a regulatory analysis of the liner issue for submittal to EG&G/DOE on Friday, October 15, 1993. EG&G/DOE and ES will meet on Monday, October 18, 1993 at 8:00 a.m. to discuss the analysis.

3.) Draft Dispute Resolution Methodology

Randy Ogg distributed the draft dispute resolution methodology paper for team review and comment. Comments were requested by the close of business on October 13, 1993.

4.) Identification and Prioritization of Issues Associated with the IM/IRA Program.

The following issues were identified and prioritized:

<u>Item</u>	<u>Priority</u>
Use of temporary units to provide/permit waste storage	1
Data from Pond 207B (schedule issue)	1a
Remediation Goals (PRGs)	2
Land use Criteria	2a
Liner Removal -liner characterization	3
Definition of contaminated media	3a
Requirements for additional background characterization	4
Building 788 D&D	5
OU9 OPWL within OU4	6
Utilities and Pond Infrastructure remediation/disposal	6a

3/73

Waste Generation/Disposal	7
-Investigated derived waste material	
-Identification of waste disposal facilities	
Consolidation of hazardous waste contaminated media without triggering LDR or landfill siting requirements	8
Identification of underground injection restrictions	9
Site logistical construction interferences	10

EG&G will include these issues onto the master schedule to identify when they need to be resolved. These items will be addressed at future team meetings.

It was decided that the infiltrometer tests that were specified in the workplan would not be performed. Steve Paris will prepare a letter justifying why these tests will not be performed. EG&G has performed a groundwater recharge study which included infiltration tests. This data may be utilized in the OU4 IM/IRA report.

It was decided that EG&G will modify the Part A Permit for Building 788 so that the pond drill cuttings (investigation derived material) can be stored within the building. On a longer term basis, the Permit for pad #750 should be modified so that these wastes can be stored. Harlan Ainscough will look into this issue. A conference call will occur on Thursday, October 14, 1993 to discuss the progress on this issue.

It was discussed that results from the upcoming pond drilling were important, but would not be received for the first draft of the IM/IRA-EA decision document. It was decided that the results may be attached to the first draft, and would be worked into the second draft.

5.) Applicability of Preliminary Remediation Goals

The CDH has indicated that PRGs would not be approved. Phil Nixon indicated that ES needs to resolve this issue as soon as possible because this is a critical path activity.

Harlan Ainscough indicated that CDH had an approach that was similar to that of a baseline risk assessment which was preferred. The onsite resident scenario would have to be used because it is the most conservative.

ES will use the onsite resident scenario in their risk assessment activities.

A meeting was set at the CDH office on October 13, 1993 at 8:00 a.m. to determine the details of the CDH method.

6.) Post Closure Assessment Monitoring

It was agreed that the IM/IRA-EA decision document would include a conceptual Post Closure Care Plan that will be developed further during title design. The plan will not be finalized until the results of the Phase II groundwater characterization are complete. The contents of the plan will include:

- a) number and location of wells for vadose zone and groundwater monitoring
- b) constituents for analysis
- c) frequency of analysis
- d) inspection procedure/frequency
- e) maintenance requirements
- f) performance monitoring (as required)

7.) IM/IRA Outline

Randy Ogg distributed copies of the IM/IRA outlines, and a detailed outline for the RFI/RI chapter. The team was asked to provide any comments by October 26, 1993.

8.) Building 788

EG&G/DOE is considering addressing the removal of Building 788 as a separate project. The options are:

- a) integrated within the OU4 IM/IRA (current strategy)
- b) separate IM/IRA
- c) RCRA closure
- d) CERCLA Removal Action

It was agreed that it would be best if Building 788 was not used as a model/pilot study for the D&D of nuclear facilities at the Rocky Flats Plant because of the attention that this could draw.

Harlan Ainscough indicated that DOE would have to provide justification for removing Building 788 from the Phase I IM/IRA-EA decision document.



Philip Nixon, Project Manager

INFORMAL MEMORANDUM

Date: September 28, 1993

To: Randy Ogg

From: Andy Ledford

Subject: OU4 PHASE I REMEDIATION PLANNING STATUS

Since you were out of town and ill last week and the week before, I suspect that you were not able to complete a draft of the Project Management Plan on the date requested in my memo of Sep 15, 93; therefore, let's set Oct 1, 93 as the new target date.

We need to reschedule the project review previously scheduled for Sep 21, 93. Let get together on Sep 29, 93 at 3:00 pm. At that time, please provide status on the items mentioned in my Sep 15 memo as well as the following items:

- Development of final WBS
- Development of cost estimate
- Development of new work package(s)
- Development of BCP
- Development of detailed schedule and milestones for next quarter
- Development of community relations/public disclosure strategy
- Development of contract mod for Parsons/E-S
- Resolution of pond drilling and IDM disposal issues

If you have a schedule conflict, please let me know.

Attachments:

Memo - Sep 15, 93

Draft WBS Dictionary

Transmit via: ☐ Courier ☐ FAX ☐ Mail

INFORMAL MEMORANDUM

Date: September 15, 1993

To: Randy Ogg

From: Andy Ledford

Subject: COMPLETION OF OU4 PHASE I REMEDIATION PLANNING

Attached is a draft of a proposed Project Management Plan for the project. Please review it to become familiar with the specific approach being used, and then complete the plan to the requirements of 4700.1. Set Sep 24, 93 as your target for completion of a draft plan.

You will notice as you review the current draft that there is significant emphasis (nearly exclusive) on the activities between now and the award of construction contract. Our planning should be expanded to include as much as we can regarding the construction and post-construction period or, at a minimum, references should be made in the plan that these things exist and when planning for them will be completed.

I am preparing a WBS dictionary for the current WBS and hope to have some version of that completed by Friday. My reason for doing so at this time is to have written definition of work elements for discussion with the regulators on Monday. For those to be useful, they would have to correspond to the WBS used for planning so far; however, I intend to rebuild the WBS to align it with the higher-level WBS that we have been given from DOE and ERM. That effort will result, of course, in some changes to the dictionary.

Similarly, the schedule must be modified. Of course, the milestones to which we have committed are now fixed in time; however, changes in the WBS may result in schedule changes concerning descriptions and clarifications. Further, remember that the current schedule is only a WBS element schedule - not an activity schedule. In many cases, it will be appropriate to expand the current level of detail to identify and schedule activities required to produce the WBS elements.

Your completed plan must include the modified WBS and a schedule which defines and can be used to control all activities to be performed on the project.

Frazer was quite clear, in a recent meeting, that he/DOE considers us to be authorized to pursue the streamline course NOW. Of course we still need PCCB authorization for specific scope modifications, but his intent was, I'm sure, to remind us that the plan we have created should be in full execution as of several days ago. Since you have the responsibility to execute the plan, you must understand and agree with it (or modify it as appropriate), and then you must ensure that the work is performed in accordance with the plan. There are a number of activities which our planning shows have already commenced and others which will start very soon.

I would like for you to provide me with information concerning the following points:

- Location of joint working sessions and calendar for when the meetings will occur
- List of joint session participants
- Specific objectives of the sessions and schedule showing "got to reach resolution" dates for all issues to be resolved by joint sessions

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September 15, 1993

with minutes
page 2 of 3

Page 2

- Method(s) to be used to resolve/arbitrate log jams in the joint sessions
- Minutes to be kept of sessions?

As I mentioned in an earlier letter, I want to establish weekly project reviews for all projects in the program (currently only you). I would like for us to get together on Tuesday, Sep 21, 93 for our first session. Please be prepared to discuss your progress against your plan for all on-going and upcoming activities.

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8/73

OU4 Phase I Remediation (Streamline) WBS Dictionary

Sheet 19 of 11

WBS Element	Resp Org	Title	Description
25000		IM/IRA Award of Contract & Notice to Proceed	Completed and signed subcontract for construction of the pond closure, including site preparations and RCRA cap. Contains 1 IAG milestone (Milestone 6).
33100		Construction Request for Proposal (RFP)	The complete Request for Proposal for the ponds closure, including the Title II Design, Davis-Bacon determination, Short-list of pre-qualified bidders, and DOE authorization to proceed with the procurement
33110		Construction Bid Package	A complete Title II Design package, annotated as appropriate for inclusion in the Request for Proposal.
33170		KD-3 Approval to Commence Construction	Key Decision by DOE authorizing EG&G to proceed with subcontracting for construction of the RCRA cap and related site preparation and activities.
33300		Proposal	Proposal packages from the pre-qualified bidders/subcontractors for pond closure construction.
33500		Technical Evaluation	Evaluation of the subcontractor proposals against technical criteria
33600		Cost Evaluation	Evaluation of the subcontractor proposals against the government estimate.
33700		Negotiations	Proposed subcontract for pond closure, with documentation of the negotiations with the winning bidder.
33799		Schedule Reserve for HQ Approval of Construction Contract	Schedule reserve. While positioned in the construction subcontracting portion of the project, this reserve is available to management to apply as appropriate throughout the project duration. The reserve addresses known uncertainties within the scope planned and scheduled for the project, and is not intended to address additions in scope.
33800		DOE HQ Approval of Construction Contract	DOE HQ approval and transmittal to EG&G to award construction subcontract
33900		Final Recommendation to DOE HQ	Subcontract package and transmittal to DOE HQ for action.

9/72

OU4 Phase I Remediation (Streamline) WBS Dictionary

Sheet 20 of 11

WBS Element	Resp Org	Title	Description
50000		Prog/Proj Mngmnt	Cost and schedule control and reporting; supervision of subcontractors and support groups; preparation, review, and obtaining of approvals for strategies on various interfaces between program and other projects and established plant procedures/requirements.
51000		Hazards Asses Strategy	Plan, with approval, for which documents must be prepared; justification for waivers or application of graded-approach; and those necessary waivers or concurrence from DOE. Revisions to logic network, cost, schedule, and other planning documents to incorporate strategy into program.
52000		Modified Baseline	Roll-up of funding authorization products.
52100		WP Devel & Revisions	Revisions to Work Package, including necessary support documentation for basis-of-estimate, etc., to implement the program plan resulting from DOE's dispute resolution process (over the RFI/RI report milestones). Revised and approved Work Packages.
52200		PCCB Prep & Approval	All necessary documents preparing for and used in submitting a Budget Change Proposal to the PCCB, resolution of issues raised in the PCCB review, and approval of the BCP.
53000		Fire Protect Strategy	Review and identification of broad Fire Protection requirements, any concurrence required from EG&G and DOE staff, and basic design direction (such as acceptability of propane use or waste storage tents). For details of specifications and design requirements, see design elements in 90000 leg.
54000		Resolution NEPA Strategy	Decisions, with DOE concurrence as necessary, on the scope of the proposed action to be included in the IM/IRA and/or other documents (which are specified); any supplemental decisions to bring program into compliance with DOE Order for integration of NEPA/CERCLA/RCRA documents. DOE commitment to review durations, due dates, and coordination of comments. For DOE NEPA determination, see 70000 leg.
54100		EG&G/NEPA Strategy	Proposals, letters, and other documents showing EG&G recommendation, with backup, on EG&G's recommendation of a NEPA strategy to DOE.

173

OU4 Phase I Remediation (Streamline) WBS Dictionary

WBS Element	Resp Org	Title	Description
54200		DOE/NEPA Strategy	Responses, letters, and other documents showing DOE's strategy, with backup as available, for completing the NEPA process for the program.
55000		Site Prep Strategy	EG&G's plan for managing and staffing, cost and schedule control, and reporting/interface with DOE organizations for the various elements of site preparation: razing of B788, relocation of utilities, abandonment of utilities. Also a tentative plan for the contracting and split between on-site and sub-contracted work elements.
56000		OU 9 interface Strategy	EG&G's proposal, with supporting documentation, on the remediation of the OU 9 old process waste line that runs along the ponds; and how that remediation will be managed to avoid interference with either OU 4 or OU 9 closures.
57000		Comm Relations Strat	A plan identifying, in OU 4-specific terms, the mandatory public interactions to support closure. Also, a plan to incorporate prudent additional public involvement, if found to be reasonable, to supplement the mandatory interaction, somewhat in parallel with the supplemental DOE/regulator interaction established in the dispute resolution.
57100		Mandated/Required	A portion of the community relations strategy that identifies, in OU 4 specific terms, the mandatory public involvement.
57200		Prudent	A portion of the community relations plan to incorporate prudent additional public involvement, if found to be reasonable, to supplement the mandatory interaction, somewhat in parallel with the supplemental DOE/regulator interaction established in the dispute resolution
58000		Construction Management	All construction management products, including the level-of-effort and project-specific products
59000		Decision on Options	Management directive with DOE concurrence as necessary, on whether/what scope to include in the IM/IRA DD options analysis sections on the option of closure with sludge in-place.

OU4 Phase I Remediation (Streamline) WBS Dictionary

WBS Element	Resp Org	Title	Description
71220		Criteria	Listing with annotations of the criteria to be used in evaluating potential remedies; for example, consistency with final response, protection of human health and the environment, compliance with ARARs, long-term effectiveness, reduction of toxicity or mobility of the hazardous constituents, short-term impacts to workers, the public, or the environment, ease of implementation, cost, and acceptability to the State and the public.
71230		Options	Descriptions of potential remedies and technologies applicable to the Solar Ponds closure.
71240		Remedial Options Analysis	Analyses and screening of the remedial options developed in WBS 71230. To include some brief analyses that show certain options are unsuitable, and more extensive analyses of a "no-action" options and options that are technically or otherwise suited to the Solar Ponds.
71250		Selected Remedial Alternative	Comparison of the analyses created in WBS 71240 against the established criteria from WBS 71220. Additional analysis, if needed, to allow direct comparisons between options. Ranking, prioritization, or other suitable conclusions on the best option(s) for implementation.
71260		Identification of ARARs	Compilation of those cleanup standards, control standards, and other requirements, criteria, and limitations promulgated in federal and state laws that potentially address the hazardous substances and conditions found at the Solar Ponds, or are sufficiently similar to conditions at the ponds that their use is well-suited to the pond closure.
71270		Risk Analysis	Characterization of the risks to human health and the environment, based on the RFI data obtained for the Solar Ponds. The analysis will address all hazardous substance source areas with risk levels greater than 10^{-6} evaluated at the source.
71310		Pond and Utilities Conceptual Design	Conceptual design (complete to 40%) for the RCRA cap and related utilities work in OU 4
71320		Sketches	Sketches at a conceptual-design level, complete to 40%, for the RCRA cap and related closure construction.

OU4 Phase I Remediation (Streamline) WBS Dictionary

WBS Element	Resp Org	Title	Description
71340		Schedule	A preliminary schedule, at the conceptual-design level and including appropriate schedule reserve, for closure construction of the ponds.
71354		Abandoned Utilities	Conceptual design (complete to 40%) for addressing abandoned utilities in the OU 4 boundary consistently with closure.
71360		Preliminary Cost Estimate (50%)	A preliminary cost estimate, at the conceptual-design level and including appropriate contingency, for the ponds closure.
71700		IM/IRA DD Reviews	All products necessary to complete DOE, CDH, EPA, and public review, comment, comment-resolution, and final signature-approval for the IM/IRA DD. Contains 4 IAG milestones.
71710		Draft Phase I Proposed DD	All products necessary to complete DOE, CDH, and EPA review, comment, and comment-resolution for the IM/IRA Draft DD. Contains joint working sessions for EG&G, DOE, CDH, and EPA which will provide the substantive input to the Decision Document and result in a highly streamlined formal review cycle. The working sessions culminate in a Round Table review EG&G, DOE, CDH, and EPA (see 71900 for incorporation of Round Table results). Contains 1 IAG milestone
71711		Round Table Session	An informal, simultaneous review, in a round table forum for EG&G, DOE, CDH, and EPA to conclude the early regulator input on the draft DD. The review is linked in time to the production of a draft DD, and is not tied to any particular percent completion of the options analyses and design portions of the DD. It is expected, however, that the baseline scope of the DD analyses will be complete, that the enhanced/accelerated scope of the DD analyses will be well-advanced, and that the design will be well-advanced towards 40% completion.

OU4 Phase I Remediation (Streamline) WBS Dictionary

WBS Element	Resp Org	Title	Description
71719		Schedule Reserve for Milestone 1	Schedule reserve. While positioned in the first half-year of the project, this reserve is available to management to apply as appropriate throughout the project duration. The reserve addresses known uncertainties within the scope planned and scheduled for the project, and is not intended to address additions in scope.
71720		Review Cycle	<p>A formal review by CDH and EPA of the draft DD, including transmittal of the draft, comments and resolution, and the subsequently revised DD. The DD transmitted for review is to contain a 40% design with all other sections complete. The revised DD is also to contain a 40% design with all other sections complete.</p> <p>The components of 40% design are:</p> <ol style="list-style-type: none"> 1. A description of the selected alternative 2. A preliminary set of drawings which include: <ol style="list-style-type: none"> a. Site Plan showing the structures to be removed b. Site Plan showing utilities to be removed and to be re-routed c. Site Plan showing extent of engineered cover d. cross section of cover 3. Implementation plan <ol style="list-style-type: none"> a. Waste Management Plan <ol style="list-style-type: none"> i. waste flow diagram b. For Waste Treatment/Decon facility: <ol style="list-style-type: none"> i. Process flow diagram ii. Facility layout (not equip arrangement) iii. Materials and equipment list d. Identification and description of required engineering/treatment studies e. Construction quality assurance plan 4. Specification package outline 5. Preliminary construction schedule 6. Preliminary cost estimate <ol style="list-style-type: none"> a. Capital costs b. Operating costs

OU4 Phase I Remediation (Streamline) WBS Dictionary

Attachment 3

Sheet 7 of 11

WBS Element	Resp Org	Title	Description
71721		Transmittal Package	The Draft DD with transmittal authority, for delivery to CDH and EPA. The Draft DD is to contain a 40% design with all other sections complete. The number of copies : 15. Contains 1 IAG milestone (Milestone 1).
71721		Transmittal	see 71700 leg WBS dictionary
71722		Review & Comment	Meeting minutes and correspondence documenting CDH and EPA comments on the Draft DD.
71722		Review & Comment	see 71700 leg WBS dictionary
71723		Comment Resolution	Meeting minutes and correspondence documenting the response to CDH and EPA comments. Also, meeting minutes and correspondence documenting interactions with the regulators to ensure their comments have been appropriately resolved.
71723		Comment Resolution	see 71700 leg WBS dictionary
71724		Comment Incorporation	A revised Draft DD, now titled Proposed DD, ready for a final regulator review to confirm comments were incorporated.
71724		Incorporate Comments	see 71700 leg WBS dictionary
71725		Joint Working Sessions	Meeting minutes, notes, and other comments from a series of informal reviews of the IM/IRA DD-in-progress. These sessions are intended to collect all substantive comments from the regulators, and all comments needed to make preliminary decisions that must be included in the draft DD (especially the choice of a remedial action). These sessions form the basis for the accelerated schedule for formal review and approval of the DD.
71729		Schedule Reserve for Milestone 2	Schedule reserve. While positioned approximately one-year into the project, this reserve is available to management to apply as appropriate throughout the project duration. The reserve addresses known uncertainties within the scope planned and scheduled for the project, and is not intended to address additions in scope.

OU4 Phase I Remediation (Streamline) WBS Dictionary

Attachment 3
Sheet 8 of 11

WBS Element	Resp Org	Title	Description
71730		Phase I Proposed DD	All products necessary to complete public review, comment, and comment-resolution for the IM/IRA Proposed DD. Contains 1 IAG milestone.
71731		Review Cycle	<p>All products necessary to complete public review, comment, and comment-resolution for the IM/IRA Proposed DD, and to prepare the final DD. Contains 1 IAG milestone.</p> <p>(Note that this WBS element duplicates 71730 as of 9/9/93. This was done to allow a direct parallel between the Draft and Proposed review cycles.)</p>
71732		Transmittal	The Proposed DD with transmittal authority, for delivery to CDH for public review. Any additional CDH and EPA comments during the public review period are expected to be minimal, based on the interactions between DOE and the regulators in the Joint Working Sessions and the Round Table Session. The Proposed DD is to contain a 40% design with all other sections complete. The number of copies : 20. Contains 1 IAG milestone (Milestone 2).
71732		Transmittal	see 71700 leg WBS dictionary
71733		Public Review and Comment	All meeting minutes, correspondence, results of public meetings, and comments from the public.
71734		Comment Resolution	Meeting minutes and correspondence documenting the resolution of public and additional CDH and EPA comments.
71735		Comment Incorporation	A revised Proposed DD, now titled Final DD, ready for final review and approval by the CDH and EPA.
71740		Responsiveness Summary (Draft)	A Responsiveness Summary, drafted, with regulator review, comments resolved and incorporated, into a final document suitable for inclusion in the Final DD. Contains 1 IAG milestone.

OU4 Phase I Remediation (Streamline) WBS Dictionary

Sheet 9

Attachment 3

11

WBS Element	Resp Org	Title	Description
71741		Review Cycle	<p>A Responsiveness Summary, drafted, with regulator review, comments resolved and incorporated, into a final document suitable for inclusion in the Final DD.</p> <p>(Note that this WBS element duplicates 71740 as of 9/9/93. This was done to allow a direct parallel between the Draft and Proposed review cycles.) Contains one IAG milestone.</p>
71742		Transmittal Package	Draft Responsiveness Summary with transmittal authority for CDH and EPA review. The number of copies: 15. Contains 1 IAG milestone (Milestone 3).
71743		Review and Comment	Meeting minutes, correspondence, and other comments from CDH and EPA on the draft Responsiveness Summary.
71744		Comment Resolution	Resolution of all regulator comments on the draft Responsiveness Summary.
71745		Incorporated Comments	Responsiveness Summary, now title Final, that resolves/incorporates all CDH and EPA comments on the draft.
71750		Final IM/IRA DD and Responsiveness Summary	The final DD and final Responsiveness Summary, with transmittal to the regulators and distribution to Reading Rooms and inclusion in the Administrative Record. Contains 1 IAG deliverable.
71751		Review Cycle	<p>(Note that this WBS element duplicates 71750 as of 9/9/93. This was done to allow a direct parallel between the Draft and Proposed review cycles.) Contains one IAG milestone.</p>
71752		Transmittal Package	The Final DD and Responsiveness Summary, with transmittal authority. Contains 1 IAG milestone (Milestone 4).
71753		Public Reading	On on-going availability to the public of the final DD in the DOE Reading Rooms and/or through direct request to DOE.
71759		Final Responsiveness Summary	Printed, finalized copies of the final responsiveness Summary section of the DD, for transmittal and distribution as needed. Number of copies: ??

7/73

OU4 Phase I Remediation (Streamline) WBS Dictionary

WBS Element	Resp Org	Title	Description
71760		Final DD	Printed, finalized copies of the final DD (exclusive of the Responsiveness Summary section prepared for WBS 71759), for transmittal and distribution as needed. Number of copies: ??
71900		Draft Proposed IM/IRA DD	All work to incorporate the results of the Round Table Review performed in WBS 71711. The revised document produced is the draft to be formally submitted to the agencies in WBS 71721.
83000		Agency Review and Approval	Transmittal package for the IM/IRA Implementation Plan, which provides a 90 % Title II design to the agencies for review and comment. Meeting minutes, correspondence, and comments from CDH and EPA's review of the IM/IRA Implementation; resolution and incorporation of those comments. The final 10 % of the Title II design is also incorporated into the Title II package by EG&G. The resulting product contains a complete Title II design. Contains 1 IAG milestone.
83###		Transmittal Package	IM/IRA Implementation Plan, containing a 90 % Title II design, with transmittal authority, for CDH and EPA review. Number of copies: ? Contains 1 IAG milestone.
83###		Review and Comment	All meeting minutes, correspondence, and comments on the IM/IRA Implementation Plan.
83###		Comment Resolution	All meeting minutes, correspondence, and resolutions of comments from the CDH and EPA review of the IM/IRA Implementation Plan.
83###		Comment Incorporation	Final IM/IRA Implementation Plan, ready for agency approval. Includes incorporation of regulator comments and the final 10 % of the Title II design.
83###		Review and Approval	Final IM/IRA Implementation Plan, including a complete Title II design. Transmittal package, including transmittal authorization. Any final regulator comments and resolution prior to printing, final signatures indicating approval, and final printing and distribution; number of copies: ?
91000		KD-1 and KD-2 Approval to Commence Title II	Key Decisions provided by DOE authorizing EG&G to proceed with Title II design concurrently with completion of the IM/IRA DD.

OU4 Phase I Remediation (Streamline) WBS Dictionary

WBS Element	Resp Org	Title	Description
92100		Drawings	Title II design drawing for the RCRA cap, including in-progress drawings at 60% and 90% for review
92300		Specifications	Title II specifications for equipment and materials for the pond closure, including early development of specifications for long-lead procurement items.
92500		Cost Estimate	Title II cost estimate, with appropriate level of contingency, for the pond closure
94999		Schedule Reserve for Title II Design Review and Approval	Schedule reserve. While positioned in the Title II design portion of the project, this reserve is available to management to apply as appropriate throughout the project duration. The reserve addresses known uncertainties within the scope planned and scheduled for the project, and is not intended to address additions in scope.
95000		Title II Design Review & Approval	All meeting minutes, correspondence, and comments on the 60% and 90% designs, including review through a round table forum with DOE, CDH, and EPA. Incorporation of comments, and completion of a Title II package suitable for submittal to the regulators in the IM/IRA Implementation Document.
95000		Title II Design Review and Approval	Two internal Rocky Flats reviews of the Title II Design of the pond closure at 60% and 90% complete, including response to comments and incorporation of changes as needed.
95###		60 % Design Review	Results of the 60% design review, including informal, round table review by DOE, CDH, and EPA. Meeting minutes, correspondence, comments, resolution, and incorporations from the review. The revised design produced after comments are resolved and incorporated is the 90% Title II design.
95###		90 % Design Review	Results of the 90% design review, internal to Rocky Flats, and work products necessary to complete the final 10 % of the Title II design. Work products needed to complete the final 10% of the design will be incorporated simultaneously with comments from CDH and EPA review of the IM/IRA Implementation Document.

INFORMAL MEMORANDUM

Date: September 15, 1993

To: Randy Ogg

From: Andy Ledford

Andy

Subject: COMPLETION OF OU4 PHASE I REMEDIATION PLANNING

Attached is a draft of a proposed Project Management Plan for the project. Please review it to become familiar with the specific approach being used, and then complete the plan to the requirements of 4700.1. Set Sep 24, 93 as your target for completion of a draft plan.

You will notice as you review the current draft that there is significant emphasis (nearly exclusive) on the activities between now and the award of construction contract. Our planning should be expanded to include as much as we can regarding the construction and post-construction period or, at a minimum, references should be made in the plan that these things exist and when planning for them will be completed.

I am preparing a WBS dictionary for the current WBS and hope to have some version of that completed by Friday. My reason for doing so at this time is to have written definition of work elements for discussion with the regulators on Monday. For those to be useful, they would have to correspond to the WBS used for planning so far; however, I intend to rebuild the WBS to align it with the higher-level WBS that we have been given from DOE and ERM. That effort will result, of course, in some changes to the dictionary.

Similarly, the schedule must be modified. Of course, the milestones to which we have committed are now fixed in time; however, changes in the WBS may result in schedule changes concerning descriptions and clarifications. Further, remember that the current schedule is only a WBS element schedule - not an activity schedule. In many cases, it will be appropriate to expand the current level of detail to identify and schedule activities required to produce the WBS elements.

Your completed plan must include the modified WBS and a schedule which defines and can be used to control all activities to be performed on the project.

Frazer was quite clear, in a recent meeting, that he/DOE considers us to be authorized to pursue the streamline course NOW. Of course we still need PCCB authorization for specific scope modifications, but his intent was, I'm sure, to remind us that the plan we have created should be in full execution as of several days ago. Since you have the responsibility to execute the plan, you must understand and agree with it (or modify it as appropriate), and then you must ensure that the work is performed in accordance with the plan. There are a number of activities which our planning shows have already commenced and others which will start very soon.

I would like for you to provide me with information concerning the following points:

- Location of joint working sessions and calendar for when the meetings will occur
- List of joint session participants
- Specific objectives of the sessions and schedule showing "got to reach resolution" dates for all issues to be resolved by joint sessions

Transmit via: ☐ Courier

☒ FAX

☐ Mail

September 15, 1993

Attachment 4
Page 3 of 2

Page 2

- Method(s) to be used to resolve/arbitrate log jams in the joint sessions
- Minutes to be kept of sessions?

As I mentioned in an earlier letter, I want to establish weekly project reviews for all projects in the program (currently only you). I would like for us to get together on Tuesday, Sep 21, 93 for our first session. Please be prepared to discuss your progress against your plan for all on-going and upcoming activities.

21/72

Project Management Plan
OU4 Phase I Remediation

Purpose

The purpose of this project is to implement interim Phase I remediation of the solar ponds (OU4) at the Rocky Flats Plant. Phase I remediation consists of characterization and quantification of contaminants present in the ponds and the soils beneath, removal of existing water and sludge from the ponds, and implementation of a system or methodology to prevent further contamination of the soils and ground water or spread of contamination already present.

Objectives

The execution of this project is mandated and governed by the Interagency Agreement (IAG). Certain milestones were developed and promulgated in the IAG upon its issue; however, as part of the resolution of a dispute concerning achievement of two project milestones, modification of certain original milestone dates is anticipated. Therefore, it is an objective of this project to define new, reasonable, and achievable milestones for six (6) deliverables to the Regulators and the public. These milestones are described elsewhere in this Plan. In addition, one new milestone, corresponding to emptying waste from the ponds, is being added. This milestone is being incorporated in the Accelerated Sludge Removal Project and is therefore not discussed in this Project Management Plan.

Once the milestones are defined and incorporated into the IAG, they become legally binding upon the parties involved (the Agencies and the DOE) and significant monetary penalties will be assessed if they are not met. Therefore, it is an objective of the project to ensure that all IAG deliverables are produced on or before their respective milestone dates.

As part of the dispute resolution process mentioned above, the Regulators have offered to provide relief to the DOE with regard to two previously missed IAG milestones associated with the investigatory phase of the project. In return for this relief, the Regulators require acceleration of the start of construction of the interim remediation system with respect to its current IAG date of January 27, 1997. The target for this acceleration is 12 months. Therefore, it is an objective of this project to award the subcontract for construction, and thus commence the construction phase, no later than January 27, 1996.

Scope

The scope of this project consists of the following:

- Completion of approximately 85% of the originally planned RFI/RI field investigations and analysis of the samples collected (includes completion of sampling and analysis for 207B-series ponds)
- Reduction, analysis, and presentation of RFI/RI data and conclusions drawn therefrom

32/72

- Development of a set of alternative remediation methodologies, technologies, and systems that could be reasonably expected to effectively address the remediation objectives of OU4 considering the nature and extent of contamination revealed by the field investigations
- Production of a selection methodology to rank the set of alternatives. The methodology shall be capable of producing rankings according to the relative weights of the selection criteria
- Identification of the remedial alternative which will be implemented
- Development of a conceptual design of the selected remediation system
- Development of a work plan to identify and define tasks required to accomplish Phase II remediation of OU4
- Development of a Performance Monitoring and Assessment Plan for the Phase I remediation system
- Completion of NEPA process as required for all activities
- Field investigation, sample analysis, and data reduction and presentation as required to characterize, document, and communicate the nature and extent of contamination under pond 207C when the pond is emptied of water and sludge
- Production of an IM/IRA Decision Document
- Preparation for, conduct of, and response to all required reviews of final and intermediate products by EG&G, the DOE, the regulatory agencies, and the public
- Production of a Title II design package for all work associated with Phase I remediation of OU4 including D&D, utility relocation or abandonment, remediation system, waste treatment and storage, and temporary facilities
- Performance of treatability studies as required to identify materials of construction and waste treatment technologies
- Development of an effective community relations/information strategy
- Development of an IM/IRA Implementation Document for Phase I remediation of OU4 to support the accelerated closure
- Provide effective project management which includes cost and schedule control
- Develop and submit documentation as required to support procurement of all materials and services
- Satisfy all reporting requirements of EG&G, DOE, and the regulatory agencies
- Conduct of joint working sessions consisting of EG&G, DOE, and the regulatory agencies to perform alternatives identification, ranking, and selection
- Development of criteria/standards to define and authorize D&D of existing site facilities
- Removal of existing site facilities as required in accordance with criteria and standards
- Development of schedule for the implementation of the remediation system and identification of dates of specific milestones required by the IAG
- Development of funding requirements for implementation of the remediation system
- Development and conduct of all safety reviews required prior to committing funds and commencing construction

- Performance of all tasks necessary to support introduction of the construction contractor(s) onto the plant site and to enable the contractor to commence work
- Implementation of the remediation system

Specific Exclusions from Scope

- Removal of existing water and sludge from the solar ponds (Note: This task is described in documentation for the Accelerated Sludge Removal Project.)
- Removal of existing sludge from the clarifier (See Note above.)
- Production of draft and final RFI/RI reports and the IM Design Work Plan (These products will be deleted from IAG deliverables by joint agreement of the DOE and the Regulatory Agencies.)

EG&G Support Organizations Scope

Engineering and Technology

- Alternative review for feasibility
- Design drawing review
- Utility identification and location support
- Assistance with hazard assessment
- Interface with subcontractor

Estimating

- Provide site factor input information
- Review construction cost estimate
- Provide assistance with site operating costs
- Provide assistance with preparation of Government estimates
- Provide Davis-Bacon estimate support

Procurement

- Support subcontract negotiations
- Support IM/IRA subcontract modification effort
- Assist with subcontractor procurement

Health and Safety

- Review and approval of Health and Safety Plan
- Assistance with hazards assessment
- Evaluation/determination of personnel protective equipment for field contractors
- Review/approval of design deliverables

Radiological Monitoring

- Contamination assessment of existing facilities (788, etc.)
- Evaluation/determination of radiological areas during field activities

Quality Assurance

- Review/approve design and specifications
- Assistance with contractor and supplier pre-qualification
- Construction QC

NEPA/Regulatory

- Prepare ADM
- Review/approve regulatory and design deliverables
- Prepare FONSI
- Assist with community relations

Systems Engineering

- Design review and approval
- Prepare fact sheets
- Construction and Operations interface

Community Relations

- Develop of community relations strategy
- Prepare fact sheets
- Schedule and attend public meetings

Environmental Remediation Management

- Review and approve COC and risk assessment methodology
- Review and approve risk assessment
- Develop streamline strategy
- Develop waste management strategy
- Develop D&D interface and define responsibilities and authorities
- Develop OU9 interface

Waste Programs

- Review and approve waste storage and handling plans
- Assist in RCRA closure and permitting

General Laboratory

- Analysis of D&D rubble for contaminant characteristics
- Perform field sampling

Construction Management

- Review and approve design deliverables
- Assist in securing construction subcontractor

Planning Baseline

Since the project scope includes definition of the remediation system to be implemented as well as its design and actual implementation, it is necessary to pre-define a baseline system so that planning of the project activities that follow the definition can proceed. The planning baseline developed includes removal of all pond structures and other existing facilities from the site; removal of minimal amounts of soil from beneath the ponds and from the site in general; packaging of pond structures and soil in approved waste containers and disposal at a commercial waste disposal facility; decontamination of D&D rubble to comply with waste minimization objectives; packaging of contaminated D&D rubble in approved waste containers and disposal at a commercial waste disposal facility; and construction of a single RCRA-compliant cap extending, nominally, to the boundaries of existing IHSS 101.

Assumptions

Procedural

Department of Energy

The DOE will commit to a high degree of interaction with EG&G and the Regulators in order to achieve the accelerated review schedule.

The DOE will authorize commitment and expenditure of funds in a timely manner. Funds will appear in the FIN plan on or before the dates needed.

The DOE will provide guidance for and approval of deferral of effort on other OUs made necessary by acceleration of effort on OU4, since funding for the ER program is fixed.

The DOE will reach closure with the Regulators regarding the above-mentioned deferral of effort on other OUs within a period of time that allows reallocation of funds within the ER program to support PCCB action in accordance with the schedule.

The DOE will support EG&G in obtaining timely and cost effective support from Wackenhut, Inc., and from the DOE security staff.

The DOE will negotiate a contract with a commercial waste disposal facility for disposal of wastes generated during the conduct of this project. Specifically, the use of Envirocare in Utah is assumed. The DOE will grant an Order waiver to allow waste disposal at a commercial facility.

The DOE will authorize early bidder qualification for all applicable procurements, especially for the construction contractor(s).

The DOE will provide, within the period defined in the schedule, authorization from the Secretary for award of the construction contract.

The DOE will authorize EG&G to proceed at Key Decision Points 2 and 3 (KD2 and KD3).

The DOE has granted approval of KD0 and will formalize that approval no later than September 20, 1993.

The DOE will either waive KD1 or will combine KD1 and KD2 at or before the time that authorization is required to proceed with Title II design.

The DOE will agree with an appropriate graded approach to safety review and documentation.

The DOE will concur in and approve hazard classification of the remediation of OU4 to be Category III.

The DOE, HQ will delegate approval authority of Category III Safety Analysis Reviews (SAR) to DOE, RFO or will approve the project SAR, if required, within the period described in the schedule.

26/73

The DOE will approve, within 2 weeks of notification, the Baseline Change Proposal (BCP).

The DOE will provide early concurrence and direction regarding the proper level of NEPA documentation to be prepared and will commit to scheduled review durations for the NEPA process.

The DOE will authorize performance of Title II design prior to issuance of the Finding of No Significant Impact (FONSI).

The DOE will provide early notification of deficiencies in the NEPA submittals such that the limited period included in the schedule to include new issues is not exceeded.

The DOE will expeditiously review and approve all standards, criteria, policies, procedures, and other such documentation necessary to conduct D&D activities on the OU4 site.

The DOE will provide funding adequate to support D&D activities on the OU4 site.

The DOE will reach agreement with the Regulators, by the time indicated on the schedule, regarding integration of closure of OU9 with this project.

The DOE will provide guidance, by the time indicated on the schedule, regarding the land use assumption required for the closure process.

The DOE will come to closure, by the time indicated on the schedule, with the Regulators regarding the current dispute resolution and will document all formal and informal agreements involved in that resolution.

The DOE will provide transmittal authorization and action for the various deliverables.

The DOE will provide authorization as required to allow long-lead procurement and authorization to supply materials so procured to contractors as Government Furnished Equipment (GFE).

The DOE will seek adjustment of the applicable IAG milestones in the event that the remediation method/system used for the planning baseline is rejected by the Regulator or the Public or is otherwise not implemented.

Regulatory Agencies

The Regulatory Agencies will consider significant deviation from the planning baseline, driven by failure of the Regulators or the Public to approve the remediation methodology described therein, to be justification for modification of applicable IAG milestone dates and/or descriptions.

The Regulators will reach agreement with the DOE regarding deferral of effort on other OUs made necessary by acceleration of effort on OU4 within a period of time that allows reallocation of funds within the ER program to support PCCB action in accordance with the schedule.

The Regulators will provide approval of necessary permits in accordance with the applicable periods described in the schedule and will consider failure of approval to be justification for modification of subsequent IAG milestone dates and/or descriptions.

Participation of the regulatory agencies in the joint development and review process for the identification and selection of the remedial alternative will be consistent and continuous over the required periods. Substantive technical input will be completed by the end of the joint process.

Durations of agency review periods will be as previously asserted by the agencies and as shown on the schedule.

Duration of public comments period will be no more than 60 calendar days.

Technical

A hybrid landfill closure (dirty closure) of the ponds is used as the planning baseline. In the event that a substantially different option is selected, then the potential impacts on the design planning, costs, and schedules will require evaluation/revision. The baseline remediation scenario has the following principal features relative to development of the IM/IRA Decision Document:

Sludges will be removed from the ponds prior to pond closure activities. Further, it is assumed that residual radiation and hazardous contaminant levels will be reduced to acceptable worker levels.

A single RCRA-equivalent cover will be placed over the Solar Evaporation Ponds. The cover will incorporate composite design features utilizing geo-membranes and synthetic liner materials, clay or compacted clays that meet the hydraulic conductivity requirements outlined in the RCRA regulations, and soil and vegetative components. Local clay will be sufficient.

It is assumed that, prior to installation of the cover, the top-most 6 inches of pond structure will be removed and disposed of as waste.

The cover design will incorporate drainage features to prevent run-on/run-off and to provide erosion control.

The cover will be sized and implemented to encompass the RCRA-designated waste zone (IHSS 101 Boundary).

Information on piping, utilities, and other below-grade structures has not been reviewed as part of this strategy. The remedial design will specify the removal or relocation of underground structures and utilities where appropriate based on plant drawings and other information.

Gradient control of shallow ground water will not be required. Encapsulation of the pond areas using slurry walls, grout curtains, or any other construction is not included in this schedule assumptions/baseline.

Planning

9/14/93

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Attachment 5
Page 7 of 40

28/73

No additional funding will be provided by DOE to EG&G to support accelerated solar ponds closure. Funding for this task must be reallocated from within the planned Rocky Flats environmental restoration budget. Such reallocation will necessarily cause delays in other IAG tasks, representing good cause for schedule extensions for those tasks. Further, it is assumed that such funding is made available by DOE in a timely manner such that work dependent upon the funding can proceed in accordance with the schedule. Specifically, it is assumed that, in the case in which award of the prime construction contract and actual commencement of work under the contract fall in different fiscal years, full authority to obligate the contract funding is available at the time of contract award.

This schedule assumes a request will be granted by EPA and CDH to delete several IAG Table 6 Milestones as follows: "IM Design Work Plan", "IM/IRA Implementation Document", "Draft Phase I RFI/RI Report", "Final Phase I RFI/RI Report".

EPA, CDH, DOE, and EG&G agree to review various aspects of all documentation generated concurrently to facilitate expediting this schedule.

Public, agency, and DOE review periods will not exceed, in quantity or duration, those scheduled.

Building 788, located between Pond 207C and Pond 207A, will be removed prior to closure of the solar ponds and adequate funding will be made available to support this and other required D&D activities.

Building 788 will be closed and razed under the authority of the IM/IRA DD for closure of the solar ponds.

Sludge removal, treatment, handling, storage and disposal are outside the scope of this Phase I IM/IRA DD and schedule, and thus are not included in them.

Initial issue of Decision Document does not include the C-Pond and B-South-Pond Remedial Investigation. The C-Pond and B-South Pond Remedial Investigation will be included, through amendment of the IM/IRA, when available, and is excluded from the deliverable-commitments for IAG milestones.

A single subcontract will be let for the Building 788 demolition and Solar Pond closure construction.

The Proposed IM/IRA Decision Document will not differ significantly from the Draft Proposed IM/IRA Decision Document. Only minor changes in organization, clarification, format, or terminology will be required.

NEPA

The scope of NEPA activities will be an Environmental Assessment only (an Environmental Impact Statement will not be required).

DOE will find FONSI applies.

9/14/93

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Attachment 5
Page 8 08/17/40

89/73

DOE will commit to completing their review per the schedule.

DOE will authorize Title II Design and construction-subcontracting up to the award of the subcontract to proceed prior to FONSI issuance.

EG&G Ecology and NEPA Division (END) has in-hand all necessary environmental data/background information.

EG&G Solar Pond Projects (SPP) has in-hand all necessary RI data.

NEPA document for disposal at Envirocare is in place.

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Attachments
Page 9 081740

Work Breakdown Structure

The Work Breakdown Structure (WBS) for this project is attached herewith as Appendix A. The WBS is likely to change over the course of this project. All WBS revisions will be appended to this Plan.

9/14/93

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Attachment 5
Page 10 of 1740

51/72

Organizational Breakdown Structure

The Organizational Breakdown Structure (OBS) for this project is attached herewith as Appendix B.

9/14/93

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Attachment 5
Page 11 of 1740

32/11

Responsibility Assignment Matrix

Responsibilities for performance of the work associated with this project are identified through codes on the Work Breakdown Structure.

9/14/93

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Attachment 5
Page 12 of 740

33/75

Cost Estimate

Contingency Analysis

Find DOE guidance re: cost contingency amounts (Brusegaard)

Criteria for determining confidence level of project

State this project's confidence level and contingency %

Up to "Start of Construction" estimate

Construction estimate

Total project estimate

Life cycle costs

Breakdown by year

Breakdown by ADS (Remediation and D&D)

Support with WBS element breakdown as much as possible

Logic Network

The Logic Network for this project is attached as Appendix C. The network is likely to change over the course of this project. All formal network revisions will be appended to this Plan.

9/14/93

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Attachment 5
Page 14 of 40

35/77

Schedule

Contingency Analysis

Planning for this project has been accomplished using "good faith" estimates and commitments regarding task durations secured from all supporting entities and "applicable experience" estimates from the project management staff. It would be imprudent, however, to actually schedule project progress solely on the basis of these estimates since none of them account for occurrences which can impede the progress of the work. Planning has identified known unknowns and has estimated reasonable periods of time for their resolution. Planning has not and cannot identify or schedule unknown unknowns which will surely surface. This project spans several years, with the early tasks being to define the work to be done in the later years. This specific uncertainty regarding out-year scope combined with the inherent risks associated with execution of any complex endeavor within time constraints demands that an analysis of the planning be performed to objectively determine the probability of success.

EG&G has defined a methodology to assess the likelihood of project success. The methodology considers the total number of activities, the number of activities on the critical path, an overall analysis of float amount and distribution, the duration of the project, the complexity of the work, the work force familiarity with the work, the number of internal and external interfaces, the implications of failure, the nature of obligations being met by the work, and the level of intervention into existing systems. Although some elements of the analysis are initially subjective (assessment of complexity, familiarity, etc.), the methodology provides guidance tables to reduce these subjective elements to consistent quantitative input.

EG&G policy provides guidance that project planning is inadequate unless the probability of success is at least 75% and that no commitments regarding the project should be made unless the probability is at least 90%. It is the responsibility of the project manager to ensure that project planning is conducted and appropriately modified to result in plans that comply with the company policy.

The outputs of the methodology are two numbers representing the number of days the schedule should be extended in order to reach the 75% and 90% confidence levels. These blocks of time represent contingency that should be included in the project schedule either in a lump sum or distributed as appropriate. A distributed approach has been used for this project.

The schedule for this project has been subjected to the contingency determination methodology with the following results:

Contingency for 75% Confidence

8 days

Contingency for 90% Confidence

80 days

No effort has been made to add the contingency for 75% confidence to the schedule since the amount is so small as to be essentially zero. Contingency for 90% confidence has been distributed as follows:

Prior to Milestone 1 (covers
uncertainties regarding RFI/RI and
progress/effectiveness of roundtable
working sessions)

15 days

Prior to Milestone 2 (relatively little uncertainty regarding this milestone; DOE and Regulatory reviewers will have participated in roundtable) 5 days

Prior to completion of Title II design (efforts to compress critical path resulted in significant time removed from T2 design process) Also serves as contingency for Milestone 5 25 days

Prior to submittal of procurement recommendation to DOE, HQ. Also serves as contingency for Milestone 6 35 days

Milestone 3 and Milestone 4 affected by prior contingency addition. N/A
Further, commitment dates are "~~early~~ late" finish" plus 70 days

Working Schedule

9/14/93

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Attachment 5
Page 17 of 1740

38/72

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ACTIVITY ID	ACTIVITY DESCRIPTION	ORIG DUR	TOTL FLT	EARLY START	EARLY FINISH
33800	DPE HQ APPROVAL OF CONSTRUCTION CONTRACT	15	0	24MAY95	14JUN95
33900	FINAL RECOMMENDATION TO DDE HEADQUARTERS	10	0	10MAY95	23MAY95
51000	HAZARDOUS ASSESSMENT STRATEGY	20	60	13SEP93	80CT93
52100	WORK PACKAGE DEVELOPMENT AND REVISIONS	30	34	13SEP93	22OCT93
52200	PCCB PREPARATION & APPROVAL	10	34	25OCT93	5NOV93
53000	FIRE PROTECTION STRATEGY (WASTE STORAGE)	30	70	13SEP93	22OCT93
55000	SITE PREP STRATEGY	10	75	13SEP93	24SEP93
56000	QUI & INTERFACE STRATEGY	10	80	13SEP93	24SEP93
57200	PRUDENT	10	49	13SEP93	24SEP93
1	TRANSIT DRAFT PROPOSED DECISION DOCUMENT	0	509	23MAR94	
2	TRANSIT DRAFT PROPOSED DECISION DOCUMENT	0	464	26MAY94	
3	TRANSIT DRAFT RESPONSIVENESS SUMMARY	0	394	6SEP94	
4	TRANSIT FINAL INV/IRA DD & RESPONSIVENESS SUMMARY	0	349	8NOV94	
10	C POND EMPTY	0	342	13SEP93	
71110	EXISTING FACILITY CHARACTERIZATION	10	85	27SEP93	80CT93
71122	EXECUTED INVESTIGATION	7	24AUG93A	15EP93A	
71126	B POND	20	20	13SEP93	80CT93
71128	ANALYSIS OF B POND SAMPLES	25	20	11OCT93	12NOV93
71140	SUMMARY OF PHASE I RI DATA	20	45	13SEP93	80CT93
71150	NATURE AND EXTENT OF CONTAMINATION	40	25	13SEP93	5NOV93
71160	CONTAMINANT TRANSPORT AND FATE	40	25	13SEP93	5NOV93
71170	SUMMARY AND CONCLUSIONS	15	20	25OCT93	12NOV93
71210	LAND USE DETERMINATION	15	65	13SEP93	10CT93
71220	CRITERIA	5	0	27SEP93	10CT93
71230	OPTIONS	10	0	13SEP93	24SEP93
71240	REMEDIAL OPTIONS ANALYSIS	35	0	18OCT93	7DEC93
71245	EXECUTION PUBLIC RELATIONS	1	49	27SEP93	27SEP93
71250	SELECTED REMEDIAL ALTERNATIVE	20	0	8OCT93	12JAN94
71260	IDENTIFICATION OF ARABE	30	0	4OCT93	12NOV93
71265	CLEANUP STANDARDS	15	55	13SEP93	10CT93
71270	RISK ANALYSIS	45	0	13JAN94	16MAR94
71272	METHODOLOGY	35	35	13SEP93	24OCT93
71276	CHEMICAL OF CONCERN	10	35	18NOV93	12NOV93
71305	WASTE STAGING PRELIMINARY DESIGN	41	34	15NOV93	20JAN94
71308	SAFETY ASSESSMENT DOCUMENT	20	60	11OCT93	5NOV93
71310	POND & UTILITIES CONCEPTUAL DESIGN	15	0	10FEB94	2MAR94
71320	SKETCHES	15	0	17FEB94	9MAR94
71330	OUTLINE SPECS	5	10	17FEB94	23FEB94
71340	SCHEDULE	5	0	2MAR94	9MAR94
71352	CRITERIA	5	75	27SEP93	10CT93
71354	ABANDON UTILITIES	10	0	27JAN94	9FEB94
71356	ACTIVE DR RELOCATE UTILITIES	10	75	4OCT93	15OCT93
71358	B788 CONCEPTUAL	41	34	15NOV93	20JAN94
71360	PRELIMINARY COST ESTIMATE (\$ON)	5	0	10MAR94	16MAR94
71370	KD-0 AUTHORIZATION FOR NEW START	10	75	13SEP93	24SEP93
71380	TREATABILITY PLAN	20	110	13JAN94	9FEB94
71410	DATA EVALUATION SUMMARY	10	50	15NOV93	30NOV93

Sheet 2 of 4

Revision 94 - 14/SEP/1993

Date _____

Prepared by _____

Checked by _____

Plot Date 14SEP93
 Date Released 13SEP93
 Project Start 18JUN93
 Project Finish 06SEP96

Activity Breakdown
 Activity Name
 Progress By
 Milestones/Tag Activity

Legend
 O/P Milestone/Tag Activity

L-1 Primavera Systems, Inc.

EG&G ROCKY FLATS
 PROPOSED DU4 PH I IN WORKING SCHED
 PROJECT WORKING SCHEDULE

ACTIVITY ID	ACTIVITY DESCRIPTION	ORIG DUE	TOTL FLT	EARLY START	EARLY FINISH
71420	DATA QUALITY OBJECTIVES	5	50	1DEC93	7DEC93
71430	FIELD SAMPLING PLAN	20	559	8DEC93	12JAN94
71450	BASLINE RISK ASSESSMENT WP-HHRA	15	564	8DEC93	5JAN94
71460	QUALITY ASSURANCE/QUALITY CONTROL	15	50	8DEC93	5JAN94
71470	APPENDICES	10	569	8DEC93	21DEC93
71500	PERFORMANCE MONITORING & ASSESSMENT PLAN	30	50	15NOV93	5JAN94
71610	DEVELOP STREAMLINE STRATEGY	2		13SEP93A	13SEP93A
71630	DOE/RFD APPROVAL (STRATEGY)	5		13SEP93A	13SEP93A
71711	ROUND TABLE SESSIONS	20	20	15NOV93	14DEC93
71721	TRANSMITTAL	5	0	17MAR94	23MAR94
71722	REVIEW & COMMENT	20	0	24MAR94	21APR94
71723	COMMENT RESOLUTION	10	0	22APR94	5MAY94
71724	INCORPORATE COMMENTS	10	0	6MAY94	19MAY94
71725	JOINT WORKING SESSIONS	58	20	24AUG93A	12NOV93
71732	TRANSMITTAL	5	0	20MAY94	26MAY94
71733	PUBLIC COMMENT	45	50	27MAY94	1AUG94
71734	COMMENT RESOLUTION	10	50	28JUN94	15AUG94
71735	INCORPORATE COMMENTS	10	50	16AUG94	29AUG94
71742	TRANSMITTAL	5	339	30AUG94	6SEP94
71743	REVIEW & COMMENT	10	339	7SEP94	20SEP94
71744	COMMENT RESOLUTION	15	339	21SEP94	11OCT94
71745	INCORPORATE COMMENTS	15	339	12OCT94	1NOV94
71752	TRANSMITTAL	5	339	2NOV94	8NOV94
71753	PUBLIC READING - FINAL INV/IRA DD/RESP SUPPLY	10	339	9NOV94	22NOV94
71757	DRAFT	74	565	13SEP93	4JAN94
71758	REVIEW & APPROVE	20	619	13SEP93	8OCT93
71810	ENVIRONMENTAL CHECKLIST	20	45	13SEP93	8OCT93
71830	ACTION DESCRIPTION MEMORANDUM	20	45	11OCT93	5NOV93
71850	ENVIRONMENTAL ASSESSMENT PREPARATION	40	5	13JAN94	9MAR94
71860	DOE EA REVIEW	80	136	10MAR94	1JUL94
71870	FONSI	40	136	5JUL94	29AUG94
71890	NEPA REINVESTIGATION	60	136	30AUG94	22NOV94
78100	ANALYSIS EVALUATION	20	102	2NOV94	10DEC94
78200	C POND DATA ADJUSTMENT	60	102	20DEC94	2MAR95
78300	C POND DATA	45	102	30AUG94	1NOV94
5	TRANSMIT DRAFT INV/IRA IMPLEMENTATION DOCUMENT	0	314		6JAN95
81000	SITE PACKAGE PREPARATION	5	309	9JAN95	13JAN95
82000	CONSTRUCTION PACKAGE	5	309	9JAN95	13JAN95
83100	SUBMIT FINAL INV/IRA TITLE II DESIGN	5	10	23OCT94	6JAN95
83300	COMMENTS	10	91	9JAN95	20JAN95
83500	FINAL	10	284	6FEB95	17FEB95
83700	SIGNATURE	10	91	23JAN95	3FEB95
91000	KD-1 & KD-2 APPROVAL TO COMMENCE TITLE II	10	0	13MAY94	26MAY94
92100	DRAWINGS	60	0	27MAY94	22AUG94
92200	LONG LEAD PROCUREMENT	20	443	27MAY94	24JUN94
92300	SPECIFICATIONS	50	0	19JUL94	27SEP94
92400	SCHEDULE	10	75	27MAY94	10JUN94

Plot Date: 11SEP93

Data Base: 12SEP93

Project Start: 18JUN93

Project Finish: 09SEP94

Activity: Background

Activity: Activity

Activity: Progress

Activity: Milestones/Planning

100%

EG&G ROCKY FLATS

PROPOSED QU4 PH I IN WORKING SCHEDULE

PROJECT WORKING SCHEDULE

Plot Date: 11SEP93

Data Base: 12SEP93

Project Start: 18JUN93

Project Finish: 09SEP94

Activity: Background

Activity: Activity

Activity: Progress

Activity: Milestones/Planning

100%

EG&G ROCKY FLATS

PROPOSED QU4 PH I IN WORKING SCHEDULE

PROJECT WORKING SCHEDULE

Plot Date: 11SEP93

Data Base: 12SEP93

Project Start: 18JUN93

Project Finish: 09SEP94

Activity: Background

Activity: Activity

Activity: Progress

Activity: Milestones/Planning

100%

EG&G ROCKY FLATS

PROPOSED QU4 PH I IN WORKING SCHEDULE

PROJECT WORKING SCHEDULE

[illegible]

ACTIVITY ID	ACTIVITY DESCRIPTION	ORIG DUR	TOTL FLT	EARLY START	EARLY FINISH
92500	COST ESTIMATE	30	0	28SEP94	08NOV94
92600	TREATABILITY STUDY	50	35	27MAY94	08NOV94
93111	LOCATE ALL UTILITIES	45	150	15NOV93	26JAN94
93112	CRITERIA	10	55	27MAY94	10JUN94
93113	DRAWINGS	30	5	23AUG94	40CT94
93114	SPECIFICATIONS	25	60	13JUN94	18JUL94
93115	SCHEDULE	10	85	27MAY94	10JUN94
93116	COST ESTIMATE	20	5	5OCT94	1NOV94
93310	CRITERIA	20	5	27MAY94	24JUN94
93320	DRAWINGS	40	25	27JUN94	22AUG94
93330	SPECIFICATIONS	60	5	27JUN94	20SEP94
93340	SCHEDULE	10	75	27MAY94	10JUN94
93350	COST ESTIMATE	30	5	21SEP94	1NOV94
94100	CRITERIA	20	5	27MAY94	24JUN94
94200	DRAWINGS	60	5	27JUN94	20SEP94
94300	SPECIFICATIONS	60	5	27JUN94	20SEP94
94400	SCHEDULE	5	80	27MAY94	3JUN94
94500	COST ESTIMATE	30	5	21SEP94	1NOV94
94600	WASTE MANAGEMENT PLAN	20	65	27MAY94	24JUN94
95000	TITLE II DESIGN REVIEW & APPROVAL	35	0	9NOV94	6JAN95

7301 SWAISAC PJ34PW146121

Commitment Schedule

9/14/93

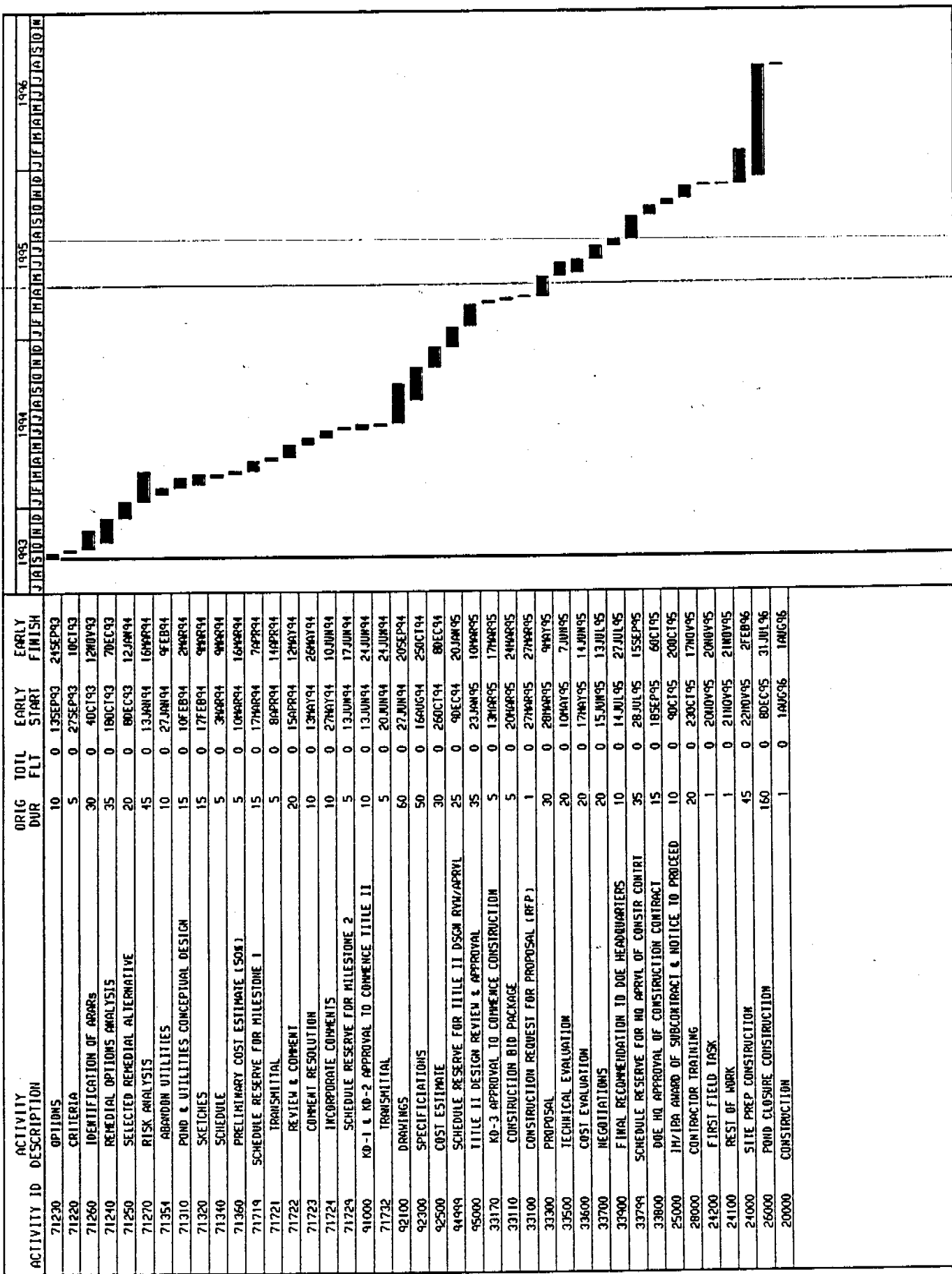
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Attachment 5
Page 1622 of 40

4/2/12



Sheet 1 of 1

1993 1994 1995 1996

J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D

1993 1994 1995 1996

J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D

EG&G ROCKY FLATS
PROPOSED 004 PHASE I INTERIM MEASURE
CRITICAL PATH

Activity, Specific Dates
Critical Activity
Project for
Milestone/Activity

Plot Date 11SEP93
Data Date 11SEP93
Project Start 18JUN93
Project Finish 18AUG96

ICJ Prilevera Systems, Inc.

REVISION #94 - SEPTEMBER 09, 1993

Date Revision

Created/Approved

Attachments
pages 30846

ACTIVITY ID DESCRIPTION		ORIG DUR	TOTL FLT	EARLY START	EARLY FINISH	1993 1994 1995 1996											
33799	SCHEDULE RESERVE FOR HQ APRIL OF CONSTR CONTRI	35	0	28 JUL 95	15 SEP 95	J	J	J	J	J	J	J	J	J	J	J	J
71719	SCHEDULE RESERVE FOR MILESTONE 1	15	0	17 MAR 94	7 APR 94	J	J	J	J	J	J	J	J	J	J	J	J
100	PROJECT START	0	0	24 AUG 93													
6	AWARD OF CONTRACT	0	193		20 OCT 95												
20	EMPTY CLARIFIER	0	638	13 SEP 93													
20000	CONSTRUCTION	1	0	1 AUG 96	1 AUG 96												
21000	MOBILIZATION/EQUIPMENT DELIVERY & LAYDOWN AREA	20	122	11 JAN 96	7 FEB 96												
22000	INCP	20	122	6 DEC 95	10 JAN 96												
22100	EXCAVATION PERMIT	15	272	28 MAR 95	18 APR 95												
22200	INCP ROUNDABLE	10	122	20 NOV 95	5 DEC 95												
22300	SITE SPECIFIC HES PLAN	20	122	20 OCT 95	17 NOV 95												
22400	SECURITY PLAN	20	267	28 MAR 95	25 APR 95												
22410	WACKENHUT SUPPORT	20	648	13 SEP 93	8 OCT 93												
22500	EG&G SUPPORT	1	286	11 APR 95	11 APR 95												
22510	RPT SUPPORT	10	286	28 MAR 95	10 APR 95												
22520	INDUSTRIAL HYGIENE	10	286	28 MAR 95	10 APR 95												
22530	DECON PRO USE	10	286	28 MAR 95	10 APR 95												
22600	JOB SAFETY ANALYSIS (JSA)	20	122	23 OCT 95	17 NOV 95												
22700	WASTE DISPOSAL PLAN	20	267	28 MAR 95	25 APR 95												
23000	EG&G SUBCONTRACTOR EQUIPMENT INSPECTION	5	187	23 OCT 95	27 OCT 95												
24000	SITE PREP CONSTRUCTION	45	0	22 NOV 95	28 FEB 96												
24100	REST OF WORK	1	0	21 NOV 95	21 NOV 95												
24200	FIRST FIELD TASK	1	0	20 NOV 95	20 NOV 95												
25000	IN/IRA AWARD OF SUBCONTRACT & NOTICE TO PROCEED	10	0	9 OCT 95	20 OCT 95												
26000	POND CLOSURE CONSTRUCTION	160	0	8 DEC 95	31 JUL 96												
28000	CONTRACTOR TRAINING	20	0	23 OCT 95	17 NOV 95												
29000	EXISTING FACILITY REMOVAL	80	92	20 NOV 95	20 MAR 96												
32120	SON	5	34	13 SEP 93	17 SEP 93												
32130	GOVERNMENT COST ESTIMATE	5	44	20 SEP 93	24 SEP 93												
32140	TECHNICAL REVIEW CRITERIA	15	39	13 SEP 93	10 OCT 93												
32150	ORGANIZATION CONFLICT OF INTEREST	5	44	13 SEP 93	17 SEP 93												
32200	PROPOSAL IN/IRA OD CONTRACT MOD	15	34	20 SEP 93	8 OCT 93												
32300	TECHNICAL EVALUATION	10	34	11 OCT 93	22 OCT 93												
32400	COST EVALUATION	10	34	25 OCT 93	5 NOV 93												
32500	AWARD IN/IRA OD CONTRACT MODIFICATION	5	34	8 NOV 93	12 NOV 93												
33100	CONSTRUCTION REQUEST FOR PROPOSAL (RFP)	1	0	27 MAR 95	27 MAR 95												
33110	CONSTRUCTION BID PACKAGE	5	0	20 MAR 95	24 MAR 95												
33130	DAVIS-BACON	20	235	17 MAR 94	14 APR 94												
33150	SHORT LIST OF BIDDERS	1	34	6 FEB 95	6 FEB 95												
33152	SELECTION CRITERIA	30	34	27 JUN 94	8 AUG 94												
33154	ADVERTISEMENT IN CBO	30	34	9 AUG 94	20 SEP 94												
33156	CBO RESPONSE	30	34	21 SEP 94	1 NOV 94												
33158	PREQUALIFICATION OF BIDDERS	60	34	2 NOV 94	3 FEB 95												
33170	KD-3 APPROVAL TO COMMENCE CONSTRUCTION	5	0	13 MAR 95	17 MAR 95												
33300	PROPOSAL	30	0	28 MAR 95	9 MAY 95												
33400	DOE HQ PROCUREMENT COORDINATION	15	156	20 NOV 94	22 NOV 94												

Plot Date 11SEP93

Data Date 13SEP93

Project Start 18JUN93

Project Finish 1AUG96

Activity Bar/Early Dates

Critical Activity

Progress Bar

Interfering Activity

CON

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Sheet 1 of 1

REVISION 9A - 14/SEPT/1993

DATE

REVISION

CREATED/REVISION

EG&G ROCKY FLATS

PROPOSED DU4 PH I IN COMMITMENT SCHD

PROJECT COMMITMENT SCHEDULE

Attachments
page 24 of 40

ACTIVITY ID	ACTIVITY DESCRIPTION	ORIG DUE	TOTL FLT	EARLY START	EARLY FINISH
71370	RD-0 AUTHORIZATION FOR NEW START	10	75	13SEP93	24SEP93
71380	TREATABILITY PLAN	20	130	13JAN94	9FEB94
71410	DATA EVALUATION SUMMARY	10	50	15NOV93	30NOV93
71420	DATA QUALITY OBJECTIVES	5	50	10EC93	70EC93
71430	FIELD SAMPLING PLAN	20	639	8DEC93	12JAN94
71450	BASELINE RISK ASSESSMENT WP-HIRA	15	644	8DEC93	5JAN94
71460	QUALITY ASSURANCE/QUALITY CONTROL	15	50	8DEC93	5JAN94
71470	APPENDICES	10	649	8DEC93	21DEC93
71500	PERFORMANCE MONITORING & ASSESSMENT PLAN	30	50	15NOV93	5JAN94
71610	DEVELOP STREAMLINE STRATEGY	2	135EP93A	13SEP93A	13SEP93A
71630	DOE/RD APPROVAL (STRATEGY)	5	135EP93A	13SEP93A	13SEP93A
71711	ROUND TABLE SESSIONS	20	20	15NOV93	14DEC93
71721	TRANSITIONAL	5	0	8APR94	14APR94
71722	REVIEW & COMMENT	20	0	15APR94	12MAY94
71723	COMMENT RESOLUTION	10	0	13MAY94	26MAY94
71724	INCORPORATE COMMENTS	10	0	27MAY94	10JUN94
71725	JOINT WORKING SESSIONS	58	20	24AUG93A	12NOV93
71729	SCHEDULE RESERVE FOR MILESTONE 2	5	0	13JUN94	17JUN94
71732	TRANSITIONAL	5	0	20JUN94	24JUN94
71733	PUBLIC COMMENT	45	50	27JUN94	29AUG94
71734	COMMENT RESOLUTION	10	50	30AUG94	13SEP94
71735	INCORPORATE COMMENTS	10	50	14SEP94	27SEP94
71739	SCHEDULE RESERVE FOR MILESTONE 3	20	379	28SEP94	25OCT94
71742	TRANSITIONAL	5	379	26OCT94	1NOV94
71743	REVIEW & COMMENT	10	379	2NOV94	15NOV94
71744	COMMENT RESOLUTION	15	379	16NOV94	8DEC94
71745	INCORPORATE COMMENTS	15	379	9DEC94	6JAN95
71752	TRANSITIONAL	5	379	9JAN95	13JAN95
71753	PUBLIC READING - FINAL IN/TRA DD/RESP SURRY	10	379	16JAN95	27JAN95
71757	DRAFT	74	645	13SEP93	4JAN94
71758	REVIEW & APPROVE	20	699	13SEP93	8OCT93
71810	ENVIRONMENTAL CHECKLIST	20	45	13SEP93	8OCT93
71830	ACTION DESCRIPTION MEMORANDUM	20	45	11OCT93	5NOV93
71850	ENVIRONMENTAL ASSESSMENT PREPARATION	40	5	13JAN94	9MAR94
71860	DOE EA REVIEW	80	216	10MAR94	1JUL94
71870	FONSI	40	216	5JUL94	29AUG94
71890	HEPA REINVESTIGATION	60	216	30AUG94	22NOV94
78100	ANALYSIS EVALUATION	20	182	2NOV94	1DEC94
78200	C POND DATA ADJUSTMENT	60	182	2DEC94	3MAR95
78300	C POND DATA	45	182	30AUG94	1NOV94
5	TRANSITION IN TITLE II DESIGN	0	349		10MAR95
81000	SITE PACKAGE PREPARATION	5	344	13MAR95	17MAR95
82000	CONSTRUCTION PACKAGE	5	344	13MAR95	17MAR95
83100	SUBMIT FINAL IN/TRA TITLE II DESIGN	5	10	6MAR95	10MAR95
83200	COMMENTS	10	126	13MAR95	24MAR95
83500	FINAL	10	319	10APR95	24APR95
83700	SIGNATURE	10	126	27MAR95	7APR95

Plot Date: 11SEP93

Data Date: 13SEP93

Project Start: 18JUN93

Project Finish: 14OCT96

Activity Bar/Early Dates

Critical Activity

Noncritical Activity

O/P

Sheet 2 of 4

REVISION 94 - 14/SEP/1993

Date: _____

Revision: _____

Checked: _____

Approved: _____

EG&G ROCKY FLATS

PROPOSED DU4 PH I IM COMMITMENT SCHD

PROJECT COMMITMENT SCHEDULE

Attachment 5
page 26 of 40

List of Milestones and Project Deliverables

Descriptions

Dates

9/14/93

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Attachment 5
Page 28 of 40

49/72

- c. If a waste treatment facility is required, then the following drawings will be included:
 - 1. process flow diagram
 - 2. facility layout (not equipment arrangement)
 - 3. materials and equipment list
- d. Identification and description of any required engineering/treatment studies
- e. Construction quality assurance plan

4) An outline of the specification package

5) A preliminary project construction schedule

- 6) A preliminary cost estimate (50% contingency)
- a. capital cost
 - b. operating costs

(2) Phase I Proposed IM/IRA DD:

Proposed: 6/24/94

IAG: 9/12/94

DD with revisions based on comments from DOE, EPA, and CDH reviews of the draft Phase I Proposed IM/IRA DD and a 40% design. Approximately 30% data validation will be included for the RFI report data. This document is the version to be submitted to the public for their review and comment.

(3) IM/IRA Responsiveness Summary:

Proposed: 11/1/94

IAG: 1/25/95

Response to the public comments. A single response may be used for a group of related comments. (WBS 71742)

(4) Final IM/IRA & Final Responsiveness Summary:

Proposed: 11/13/95

IAG: 4/24/95

DD with revisions based on the responses to public comments and agency review of the IM/IRA Responsiveness Summary. While revisions to the design necessitated by public comment will be included, the design will be at the 40% level. A revised Responsiveness Summary, based on CDH and EPA review of the IM/IRA Responsiveness Summary, will be included in the DD. (WBS 71752)

IM Design Work Plan:

Proposed: Delete

IAG: 5/24/95

(5) Final IM Title II Design:

Proposed: 3/10/95

IAG: 6/24/96

The document will present the final Title II design package of drawings, specifications, design analyses as appropriate, and the cost estimate will be included with the implementation document in the same deliverable. The document is intended for implementation by a knowledgeable subcontractor, and does not include introductions or other narratives. (WBS 83100)

IM/IRA Implementation Document:

Proposed: Delete

IAG: 2/26/96

(*) Solar Ponds Emptied of Water & Sludge

Proposed: 1/20/95

IAG: None

Waste water and sludge removed from ponds, ponds rinsed and dry of other than incidental rain water. This work is being performed as part of the Accelerated Sludge Removal Project.

(6) Award of Construction Contract:

Proposed: 10/20/95

IAG: 1/28/97

Award of construction contract commences the construction phase of the project. The selected contractor will immediately commence preparation of required safety plan, site-specific training of employees, material and services procurement, and mobilization. (WBS 25000)

September 9/14/93

Rev 4

Attachment 5
Page 31 of 40

52/73

IAG MILESTONES

DESCRIPTION	CURRENT DATE	PROPOSED DATE
Submit draft Phase I RFI/RI Report	N/A	Delete
Submit final Phase I RFI/RI Report	N/A	Delete
Submit draft Proposed IM/IRA DD (with enhanced conceptual design)	4/14/94	4/14/94
Submit Proposed IM/IRA DD	9/12/94	6/24/94
Submit IM Design Workplan (replaced with in-process design review)	5/24/95	Delete
Submit IM/IRA Responsiveness Summary	1/25/95	11/1/94
Submit Final IM/IRA DD and Resp. Summary	4/24/95	1/13/95
Submit IM/IRA Implementation Document (combined with Title II Design Submittal)	2/26/96	Delete
Submit final IM/IRA Title II Design	6/24/96	3/10/95
All Solar Ponds emptied of water and sludge	New	1/20/95
Begin Phase I IM/IRA Construction (Award of IM/IRA construction contract)	1/28/97	10/20/95

Attachment 5
page 32 of 40

Execution Strategy

Project Management

The project is managed by a dedicated Project Manager with sufficient staff to properly execute all required tasks. Staffing requirements are as follows:

TBD

Performance of work on this project is integrated and coordinated with that necessary for proper execution of the Interim Measure (IM) Program by the IM Program Manager. The IM Program is integrated into the Solar Pond Program by the Solar Pond Program Director.

An interface exists within the Program Office between the OU4 Phase I Remediation Project (OU4PIRP) and the Accelerated Sludge Removal Project (ASRP). OU4PIRP ~~relies~~ upon ASRP to remove existing water and sludge from the ponds and to leave the pond liners clean and dry.

Another interface exists between OU4PIRP and a combination of the ERM D&D organization and the Transition Management (TM) organization. ERM D&D has responsibility for acquisition and management of funding supporting D&D activities at RFP; therefore, OU4PIRP must define to ERM D&D funding requirements to accomplish removal of existing facilities at the OU4 site. However, the mission to execute D&D falls to TM; therefore, OU4PIRP must define scope, schedule, and budget targets to TM and secure commitments for these three elements prior to defining needs to ERM D&D. Even though responsibility for funding and execution of the D&D portions of this project fall organizationally outside the project, OU4PIRP retains and exercises its responsibilities and authorities to define, integrate, and manage the work to ensure that the projects objectives are met. OU4PIRP will serve as the single point of contact for information, guidance, and direction regarding execution of D&D effort in support of OU4 remediation.

EG&G Forces

To secure support from other EG&G Rocky Flats organizations, the scope of required support will be defined and transmitted, accompanied by schedule and budget targets, to the supporting organization well in advance of the need date. The supporting organization will be solicited for firm commitment to perform the scope in accordance with negotiated and adequate budget and schedule. Such commitment will be captured in writing, and the supporting organization will be expected to fully participate in OU4PIRP management efforts to ensure success of the project. Such efforts will include reporting, strategic and tactical planning, updating schedule and budget status, variance analysis, and periodic project review.

In view of the changing mission of the plant and the subsequent workforce restructuring, the project will make maximum effort to utilize EG&G personnel and support in preference to use of subcontractors. Need for EG&G support will be communicated to the affected organizations as soon as possible to ensure that the required workforce is not prematurely reduced. Current planning results in the following expected EG&G support required:

FY94	FY95	FY96
Engineering & Technology Radiological Engineering Community Relations Procurement END Health & Safety Quality	Engineering & Technology TBD	Engineering & Technology TBD

Specific scopes for these organizations are listed in the section marked *EG&G Support Organizations Scope*.

Contractor Forces

Public Involvement

Evidence of Supplier Commitment

RFP suppliers' letters

Contractors' SOW (with period of performance) and contract

9/14/93

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Attachment 5
Page 22
35 of 40

Risks

Performance of Title II Design concurrently with NEPA review

Assumption of RCRA cap

Public review process

Regulator turn-around in agreed-upon time

Commence Title II design prior to SAR completion and approval

Commence Title II design prior to public comment and official Agency approval of Proposed IM/IRA

Commence procurement of construction contractor prior to final Agency approval of Title II design

Safety

Up to "Start of Construction", limited field work

Physical surveys/field measurements

Location of underground stuff

Resumption of drilling in B ponds

Haz and rad surveys

Inventory of D&D stuff

Just reference some other safety plan, or do we have to make one?

Need for SAD/SAR included here? Discussion of contents, etc.?

Quality

Surely we can reference something here!

Specific mention of quality requirements (if any) for cap materials?

Management Control System

Technical

Cost

Schedule

Reporting

Acquisition Strategy

Long-lead procurement

Subcontractor equipment and material

Appendix A

9/14/93

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Attachments 5
Page 24
37 of 40

58/2

Appendix B

9/14/93

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Attachments
Page 26
38 0840

59/72

Appendix C

9/14/93

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6:07 PM

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Attachment 5
Page 28
39 840

00/72

Appendix D

9/14/93

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Attachment 5
Page 27 of 40
2100840

61/73

EG&G ROCKY FLATS
INTEROFFICE CORRESPONDENCE

DATE: September 3, 1993

TO: R. T. Ogg, Solar Ponds Remediation Programs, Building 080, X8608

FROM: J. G. Lehew, III., Environmental Restoration Project Engineering, Bldg. 130, X7508 *JGL*

SUBJECT: ENVIRONMENTAL RESTORATION PROJECT ENGINEERING COMMITMENT TO SUPPORT
THE OU -4 PHASE I PROJECT, JGL-040-93

PURPOSE

The purpose of this memo is to document Engineering & Technology Environmental Restoration Project Engineering commitment to support the OU 4 Phase I project.

BACKGROUND

The Solar Ponds Remediation Program (SPRP) office has procured offsite A/E services to develop the IM/IRA document. Additionally, the SPRS has requested the full time support of an E G & G project engineer to provide the technical baseline coordination for the subject project IM/IRA document. To support this request, Gary Anderson of Environmental Engineering and Technology has requested the services of Engineering and Technology Plant Project Engineering group to represent E E & T due to manpower restrictions.

DISCUSSIONS

Environmental Restoration Plant Project Engineering has committed to support the development of the technical baseline for the subject project as described on the attached OU-4 Phase I Engineering Scope document.

RESPONSE REQUIREMENTS

No response is required to this memo. Your concurrence on this memo establishes the baseline services Engineering will perform for your organization. If you have any changes or concerns, I can be reached as the above extension, or contact Mark Austin, X5119.

CONCURRENCE

R. T. OGG, Project Manager for OU-4 Phase I

Date

mra

Attachments:

As Stated

cc:

M. R. Austin

J. M. Ball

S. R. Keith

J. A. Ledford

OU 4 PHASE I ENGINEERING SCOPE
September 3, 1993

Attachment 7
Page 703

Purpose:

The purpose of the project is to provide an interim closure of OU 4 Solar Ponds. The OU 4 boundary is enclosed by the Individually Hazardous Substance Site (IHHS) 101.

Project Baseline:

The OU4 Phase I project baseline consists of four areas:

1. Removal of Building 788
This activity consists of decontamination of the existing facility and demolition.
2. Utility Relocation/Removal
All utilities, above, below and abandoned, located within the OU 4 boundary must be identified and relocated out of the OU 4 boundary.
3. Pond Liner/Soil Removal
The 203 A - C pond liners and soil approximately 6 inches below liners, will be removed and stored in waste crates. The OU 4 area will then be covered with a RCRA clay and/or geomembrane cap
4. Waste Storage
The waste material removed from the project will need to be stored as low level mixed waste. The baseline will assume an storage pad will be constructed and the waste material stored in crates located on the pad. No new structures are anticipated for the project baseline.

Scope of E & T / EE & T Services:

E & T / EE & T (E & T) will provide technical input, review and interface organization for the development of the technical baseline portions of the IM/TRA document. An A/E contractor has been procured by the SPRP to develop the IM/TRA document.

Our services will consists as:

- Assistance with development of the scope of work, work breakdown structures, schedules and deliverable identification.
- Input to the alternatives analysis development.
- Review of the alternatives for feasibility, constructability and potential problem identification.
- Providing E & T technical discipline support to interface with the A/E design disciplines.
- Providing Power Modification Request Approval.
- Assistance in identification of utilities in OU 4.
- Assist A/E in development of the Hazards Analysis.
- Assistance in system operational / component checkout testing plan development.
- Ensuring A/E deliverables to the EG&G comply with DOE/RFP design requirements.
- Providing design document review distribution to required RFP reviewers.
- Collection of all design review comments.
- Coordinate required approvals of design documents.
- Cost estimating review.

Required Deliverables to the SPRP:

1. Approval Document for the CDR
2. Approval Document for Title II Design
3. Approval of Power Modification Request
4. Validation Cost Estimate
5. IWCP approvals

9/2/93

Statement of Work:

NEPA Process for Interim Measures Program

This program will close the Solar Ponds, which includes meeting the IAG Phase I goals of remediating source and soils. We have assumed and budgeted for an EA/FONSI, and authorization for budget for an EA/FONSI will be obtained by the Program Office. The IM/IRA subcontractor is just beginning work, and is available (and expected) to prepare the draft EA. An accelerated schedule is being finalized between DOE and the regulatory agencies (CDH is the lead) as part of a dispute resolution: this accelerated schedule has pinched the time for DOE review of documents. DOE, RFO cannot commit to completing the DOE NEPA review on the same schedule as the IM/IRA DD. We will request approval to split the IM/IRA and EA into two documents, to accommodate DOE's review requirements. Also, one of the site preparation activities involves closure and demolition of Building 788 and its support structures. While demolishing B788 does not trigger or constrain the pond closure, the two projects are related in time (the schedule for B788 will be driven by the schedule for closure) and geography (the location of B788 impedes closure) and will be managed in the same program.

Objectives are listed below. In each case, a suggested list of tasks is presented. Please provide changes to the list of tasks as necessary.

Objectives and Tasks:

1) Separate NEPA and IM/IRA documentation

- 12 hrs. - Draft waiver-request from DOE Order on NEPA/CERCLA integration technical input related to DOE order 5440.1E *Assist in drafting by providing*
- Support Program Office in obtaining the waiver
 - Program office will make request

2) Authorization/determination to prepare NEPA document(s)

- 300 hrs. - Identify whether further DOE determination is needed to proceed with the draft EA (NEPA Compliance Committee Review)
- Prepare documentation as needed for determination: Checklist - Program office ADM:END
 - Identify and direct assistance END needs in obtaining authorization, arrange own support or obtain Program Office assistance in obtaining support

3) Draft EA (4/14/94)

- 65 hrs. - Assist Program Office in identifying/describing scope of the proposed action at proper level of detail
- Provide references and in-hand draft sections to subcontractor
 - Review draft EA is accurate, consistent, thorough, and meets DOE requirements - to include informal and formal reviews (NCC Review)

Provide appropriate references, as requested, to support Subcontractor providing E.A.
don

Need w
- Schedules
- hours (to be negotiated)

Attachment 7
Page 2063

04/73

4) NEPA review cycles (which are still tight)

40 hrs.

- Identify problem areas, suggest work-arounds, advise Program Office in resolving issues
- Recommend comment resolution methods and/or content to Program office

5) FONSI (11/2/94)

32 hrs

- Draft FONSI (current plan is for END to draft FONSI in-house)
- ~~Manage reviews~~
- Assist ~~END~~ in issuing final FONSI

Program office

Final EA 5/20/94
Public Comment 9/7/94 - 11/2/94
Construct June 95.

SM Nests
9/3/93

Changes
accepted
K. J. Jones
9/3/93



INTEROFFICE CORRESPONDENCE

DATE: September 2, 1993

TO: T. A. Smith, Community Relations, Bldg. T130F, X2986

FROM: J. A. Ledford, Solar Pond Projects, Bldg. 080, X8673

SUBJECT: SUPPORT FOR OU-4 ACCELERATED CLOSURE - JAL-160-93 *JAC*

In order to fulfill the requirements of the OU4 Phase I Remedial Process as required by CDH and the EPA, the Solar Pond Projects office is developing a streamlined IM/RA decision document. Support from your organization is required as briefly outlined below:

- Implement public involvement in accordance with legal requirements as specified in the RFP Environmental Restoration Community Relations Plan
- Develop a Community Relations strategy for OU-4 closure
- Prepare fact sheets and implement
- ARRANGE • Schedule and attend public meetings
- Interface with DOE in soliciting public comments
- ~~• Provide ancillary support required by public relations plan~~

Estimated Hours: 200

Estimated Funding: \$11,000

We anticipate requiring your support in early October, 1994 to begin strategy development for a ~~public relations plan~~ ^{public involvement}. Your commitment to provide the necessary resources is critical to success of this project. If you are unable to meet this commitment, please meet with us over the next two days to develop a workable schedule.

Please indicate your concurrence by signing below.

Concurrence:

T. A. Smith *9/3/93*
 T. A. Smith Date
 Manager, Community Relations *concur with changes as indicated*
 EIA

cc:

E. L. Atchison

S. R. Keith

R. T. Ogg

K. L. Ruger



INTEROFFICE CORRESPONDENCE

DATE: September 2, 1993

TO: R. W. Norton, Radiological Engineering, Bldg. T690B, x4075

FROM: J. A. Ledford, Solar Ponds Interim Measures Program, Building 080, x8673

SUBJECT: COMMITMENT TO PROVIDE SUPPORT TO OU4 REMEDIATION - JAL-162-93 JAL

An effort is currently underway to develop revised milestones for selected IAG deliverables associated with the Phase I remediation of OU4. During the planning process required to develop these milestones, one or more elements of work have been identified which could be supplied by your organization. With this correspondence we are informing you of this need and seeking your commitment to provide the service and/or products described below in accordance with the associated schedule and budget targets.

The scope of work requested from your organization is as follows:

Develop a plan to quantify, according to level of radiological contamination and required decontamination effort, all material within the boundary of IHSS 101 which would be removed from the site to accommodate subsequent construction of the remediation system. For planning and commitment purposes, the scope of such removal should be considered to be all material and facilities, other than soil and the pond liners, which extend or exist above ground level.

Perform a survey, with support from Waste Operations and Radiation Monitoring, to categorize the above-defined material into three categories: 1) uncontaminated, 2) lightly contaminated, easily decontaminated, and 3) significantly contaminated or unsurveyable, and difficult or impossible to decontaminate. Securing and funding support from Waste Operations and Radiation Monitoring is not part of this scope.

Schedule and budget targets are as follows.

Commence work on or about October 4, 1993

Complete work in 15 days (5 day weeks, 1 shift per day)

Budget: 120 hours

If you agree to perform the above-defined scope within the schedule and budget listed, please indicate your commitment to do so by signing below. If these requirements cannot be met, please contact me within two working days so that our planning can be corrected. You may contact me at the number shown above if you require any further information.

Concurrence:

R. W. Norton
R. W. Norton

9/2/93
/Date

cc:

E. I. Atchison
R. T. Ogg

S. R. Keith
K. L. Ruger

EG&G ROCKY FLATS, INC., ROCKY FLATS PLANT, P.O. BOX 484, GOLDEN, COLORADO 80402-0484 (303) 966-7000

Attachment 9
page 1081

INTEROFFICE CORRESPONDENCE

DATE: September 2, 1993

TO: B. M. Wurster, Procurement Environmental Services, Bldg. 131, X7427

FROM: J. A. Ledford, Solar Pond Projects, Bldg. 080, X8673 *JAL*

SUBJECT: SUPPORT FOR OU-4 ACCELERATED CLOSURE - JAL-161-93

In order to fulfill the requirements of the OUA Phase I Remedial Process as required by CDH and the EPA, the Solar Pond Projects office is developing a streamlined IM/IRA decision document. Support from your organization is required as briefly outlined below:

- Issue Request for Proposal
- Cost Analysis
- Prepare Letter Contract
- Award Letter Contract
- Negotiate modified IM/IRA
- Award contract mods
- Submit Request for Proposal (RFP)
- Cost Analysis
- Contract Negotiations
- Award contract

Start Date: September 1993
End Date: June 1995
Estimated Hours: 415
Estimated Funding: \$39,250

We anticipate requiring your support in September 1993. Your commitment to provide the necessary resources is critical to success of this project. If you are unable to meet this commitment, please meet with us over the next two days to develop a workable schedule.

Please indicate your concurrence by signing below.

Concurrence:

* *B.M. Wurster*

B. M. Wurster
Manager, Procurement Environmental Services

9-3-93
Date

EIA

cc:
E. L. Atchison
S. R. Keith
R. T. Ogg
K. L. Ruger

**Originally committed to dates in RTO-152-93 dated Aug 25, 1993. New commitment dates for IE support cited above need to be negotiated with Procurement.*

OPERABLE UNIT 4 IM/IRA PROGRAM
DRAFT ANNOTATED OUTLINE OF IM/IRA DD

OBJECTIVE (2 pages)

Concise statement of objective for the remedy.

INTRODUCTION (25 pages)

General information describing the Rocky Flats Plant and location, the intent of the IM/IRA project, the uniqueness of this project, dispute resolution process and chronology of events, regulatory criteria/issues associated with the Interagency Agreement (IAG) and the Solar Evaporation Ponds (SEP).

BACKGROUND (20 pages)

Information specifically pertaining to the SEP and possibly RFP, if appropriate/needed. This section will describe the overall use of the ponds, when they were constructed, the construction chronology, construction material, types of waste streams and constituents.

PART I

RCRA FACILITIES INVESTIGATION/REMEDIAL INVESTIGATION

Site Investigation (30-35 pages)

The OU 4 site investigation will describe the objectives/rationale for drilling, sampling, geophysical surveys, radiological surveys, vadose zone equipment installation, surficial soil sampling, analytical methodologies, etc.

Summary of the Phase I RFI/RI Data (40-45 pages)

This section will present, in a summary format, the data from the OU 4 Phase I RFI/RI Program. Various data will include, but may not be limited to, radiological characterization, geophysical characterization, surficial and subsurface characterization, geologic characterization, and vadose zone characterization. The "raw" data will be incorporated into appendices.

Nature and Extent of Contamination for Source and Soils (20-25 pages)

This section will be our interpretations of the data. This section will only discuss the nature and extent of contamination associated with the source and soils, as required in the IAG. Hazardous substance areas showing risk levels in excess of 10⁻⁶ will be identified.

2/73

attachment 1

Contaminant Transport and Fate (60-80 pages)

This section will present a conceptual model, contaminant behavior and mobility, and contaminant migration pathways.

Summary and Conclusions (20 pages)

This section will summarize our understanding/interpretations of the nature and extent of contamination associated with the Solar Evaporation Ponds/Operable Unit 4.

PART II

INTERIM MEASURE/INTERIM REMEDIAL ACTION DECISION DOCUMENT

Analysis of Dirty Closure vs Clean Closure/Hybrid Closure (30 pages)

This section will discuss the feasibility of clean closure and dirty closure from a regulatory, technical, and cost perspective. Also, this section will provide the rationale for the selected closure option (clean vs dirty). In general, this section will be the "bridge" from the Phase I RFI/RI to the Phase I IM/IRA.

Remedial Options Selection Criteria (20 pages)

This section will establish the criteria which will be utilized in for evaluation of the remedial options and in selecting the proposed remedy.

Remedial Options Analysis (100 pages)

This section will be the "core" of the IM/IRA DD. This section will present the remedial options evaluated against the selection criteria.

Selected Remedy (20 pages)

This section will present the selected remedy for closure of the ponds and provide the basis and justification for the selected alternative. This section may also include quantitative/qualitative modelling in support of defining the effectiveness of the selected alternative, and explanation of how the selected remedy will be consistent with Phase II for OU 4.

Identification and analysis of ARARs (20-25 pages)

This section will present the ARARs which are directly relevant, if appropriate, to the selected alternative.

Risk Assessment (70-80 pages)

This section will present a methodology and results associated with the risk of the selected remedy. In general, a risk analysis will be conducted for the selected remedy. Areas with risk levels above 10-6 will be addressed.

PART III

CONCEPTUAL DESIGN

Design Components (30 pages)

~~This section will present the "engineering" components associated with the selected alternative, ie., geomembrane, clay material, sand material, etc.~~

Conceptual Design (50 pages)

This section will be the first stage in the engineering drawings for the selected alternative. This will eliminate the IM Design Work Plan and the Title I as separate packages, and provide a 10% design level in the draft and 40% design level in the final IM/IRA DD.

PART IV

PERFORMANCE MONITORING and FURTHER EVALUATION

Performance Monitoring and Assessment of Selected Alternative

This subsection will describe the general content and requirements of the performance monitoring and assessment program for the recommended alternative. Precise locations for the actual monitoring equipment will not be able to be provided prior to completion of the final design.

Evaluation of the Effectiveness of the ITS (35 pages)

This section will present a historical overview of the ITS, the ITS configuration, design, and storage capacity available water balance data, analysis of ITS water balance, and evaluation of system efficiency.

Data Evaluation (100-150 pages)

This section will present the data, in summary format, which was evaluated in support of designing the field sampling plan. The data which is expected to be evaluated includes the RCRA ground water monitoring data, Phase I RFI/RI data, historical data, etc. This section will include a summary of the OU 4 previous investigations with the purpose of identifying data gaps needed to complete a ROD.

Data Quality Objectives (20 pages)

This section will define the OU 4 data-gaps and provide a rationale for the data quality objectives for subsequent characterization.

Field Sampling Plan (200 pages)

This section will present the methodologies utilized for supporting "plume delineation" associated with the alluvial ground water system and bedrock ground water system. It will include the standard requirements for collecting ground water samples, possible pumping tests, tracer tests, analytical methodologies, etc.

Baseline Risk Assessment Work Plan (80 pages)

This section will include the standard BRA WP requirements for a complete BRA. However, the BRA WP will be for the HHRA and not the ecology.

Quality Assurance/Quality Control (20 pages)

Standard QA/QC section required for all field activities.

PART V

D&D of Building 788

This section will describe work needed to close the two RCRA units in B788, decontaminate the structure if necessary, and demolish the structure. Support structures such as the clarifier tank and cement silos are included in the effort. The potential for decontaminating the structure to allow disposal of the rubble as non-hazardous waste will be included as appropriate

Note: The number of pages are only an estimate and do not include figures, tables, graphs, charts, etc.

Appendix A - Analytical Data

Appendix B - Applicable or Relevant and Appropriate Requirements

Chemical Specific Requirements

Location Specific Requirements

Action Specific Requirements

Appendix C - Toxicological Profiles for the Contaminants of Concern

Appendix D - Risk Analysis Calculations (selected remedy)

Appendix E - Design Sketches (enhanced conceptual)

Appendix F - Outline Specifications

Appendix G - Cost Estimate Details

Appendix H - Performance Monitoring and Assessment Conceptual Plan

Appendix I - Reserved for supplemental information on potential environmental impacts

List of Tables/Figures

List of Acronyms and Abbreviations

September 14, 1993

4:00 P. M.